In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1   1.   (Original) A method of converting page description data
2   specifying a print document into pixel data for an individual page
3   employing a data processing system including a central processing
4   unit, a first memory having a first data size and a first data
5   transfer rate and a second memory having a second data size smaller
6   than the first data size and a second data transfer rate faster
7   than the first data transfer rate, the method comprising the steps
8   of:
9   extracting a display list from the page description data;
10   allocating space within the first memory to serve as a page
11   buffer;
12   dividing the page buffer within the first memory into a
13   plurality of sub-bands, each sub-band having a data size smaller
14   than the second data size;
15   for each sub-band within the page buffer
16   for each element of the display list rendering pixels
17   within the current sub-band into a corresponding memory
18   location within the second memory,
19   following the rendering step, transferring pixel data
20   from the second memory to corresponding memory locations
21   within the current sub-band of the page buffer;
22   following the rendering and transferring steps for all sub-
23   bands, printing a page by transfer of data from the page buffer to
24   a print engine.

– 4 –

1   2.   (Original) The method of claim 1, further comprising the
2   step of:
3   disposing the central processing unit and the second memory on
4   the same integrated circuit.

1   3.   (Original) The method of claim 1, further comprising the
2   step of:
3   prior to the rendering step for each sub-band within the page
4   buffer, copying display list elements that may render to the
5   current sub-band to the second memory, and
6   wherein the rendering step employs the copy of display list
7   elements stored in the second memory.

1   4.   (Original) The method of claim 3, further comprising the
2   step of:
3   prior to the rendering step for each sub-band within the page
4   buffer, copying auxiliary data required by the display list
5   elements that may render to the current sub-band to the second
6   memory, and
7   wherein the rendering step employs the copy of auxiliary data
8   stored in the second memory.

1   5.   (Original) The method of claim 1, wherein the digital
2   processing system includes a partitionable memory selectively
3   partitionable between cache and directly addressable memory, the
4   method further comprising the step of:
5   prior to the rendering step for a first sub-band partitioning
6   the partitionable memory to include directly addressable memory to
7   serve as the second memory.

– 5 –

1   6. (Original) The method of claim 1, further comprising the
2   step of:
3   following transferring pixel data· from the second memory to
4   corresponding memory locations within the current sub-band of the
5   page buffer, compressing the pixel data and storing the compressed
6   pixel data in the first memory; and
7   the printing step includes recall and decompression of the
8   compressed pixel data.